TERRESTRIAL ANIMAL HEALTH STANDARDS COMMISSION

FEBRUARY 2013 REPORT

CHAPTER 9.6.

INFESTATION ~~VARROOSIS~~ OF HONEY BEES WITH *VARROA* SPP. (VARROOSIS)

Article 9.6.1.

General provisions

For the purposes of the *Terrestrial Code* ~~this chapter~~, varroosis is a *disease* of ~~the~~ honey bees~~,~~ (*Apis* species of the genus *Apis*) ~~*Apis mellifera* L. It is~~ caused by ~~the Korea and Japan haplotypes of the~~ mites in the genus *Varroa* ~~*destructor*~~, primarily *Varroa destructor*~~, in combination with viruses (particularly Deformed Wing Virus)~~. ~~the original hosts of which are the Korea and Japan haplotypes of *Apis cerana* (under study).~~ The mite is an ectoparasite of adults and brood of honey bees ~~*Apis* spp. *mellifera* L. During its life cycle, sexual reproduction occurs inside the honey bee brood cells. Early signs of *infection* normally go unnoticed, and only when *infection* is heavy does it become apparent. The *infection*~~ and spreads by direct contact from adult honey bee to adult honey bee, and by the movement of infested honey bees, ~~and~~ bee brood, bee products and used apicultural equipment ~~associated with beekeeping. The mite can also act as a vector for viruses of the honey bee. The mite acts as a vector and an activator for viruses of the honey bee. Symptoms of varroosis are the results of the combined action of *Varroa* spp. mites and viruses. Honey bee colonies are natural asymptomatic carriers of viruses. Varroosis is not transferred by viruses alone and needs mites to be spread from one colony to the other.~~

The number of mites ~~parasites~~ steadily increases with increasing brood production ~~activity~~ and the growth of the honey bee population, especially late in the season when clinical signs of *infestation* can first be recognised. The lifespan of an individual mite depends on temperature and humidity but, in practice, it can be said to last from some days to a few months.

Honey bee colonies are often carriers of viruses. The mite acts as a *vector* for viruses (particularly deformed wing virus) facilitating their penetration and the *infection* of the honey bees. Most of the symptoms of varroosis are therefore the results of the combined action of *Varroa* spp. mites and viruses. The viral load within the colony increases with the mite *infestation*. Insufficient or late treatments lead to the killing of mites but the virus load remains high for several weeks with deleterious effects on the honey bee population. The control of the varroosis is mainly performed by the control of *Varroa* spp. and the diagnosis of varroosis is also performed by measuring the parasitic load.

Standards for diagnostic tests are described in the *Terrestrial Manual*.

~~When authorising import or transit of the *commodities* covered in the chapter, with the exception of those listed in Article 9.6.2., *Veterinary Authorities* should require the conditions prescribed in this chapter relevant to the varroosis status of the honey bee population of the *exporting country* or *zone*.~~

When authorising import or transit of the *commodities* covered in the chapter, with the exception of those listed in Article 9.6.2., *Veterinary Authorities* should require the conditions prescribed in this chapter relevant to the varroosis status of the honey bee population of the *exporting country* or *zone*.

Article 9.6.2.

~~Trade in~~ Safe commodities

When authorising import or transit of the following *commodities*, *Veterinary Authorities* should not require any *Varroa* spp. related conditions, regardless of the *Varroa* spp. status of the honey bee population of the *exporting country* or *zone*:

1) honey bee semen;

2) honey bee venom;

3) honey bee eggs;

4) royal jelly

~~1) honey bee semen, honey bee eggs and honey bee venom;~~

~~2) extracted honey, pollen, propolis, and royal jelly for human consumption and processed beeswax (not in the form of honeycomb)~~.

~~3) extracted honey, and processed beeswax.~~

~~When authorising import or transit of other *commodities* listed in this Chapter, *Veterinary Authorities* should require the conditions prescribed in this Chapter relevant to the varroosis status of the honey bee population of the *exporting country* or *zone*.~~

Article 9.6.3.

Determination of *Varroa* spp. ~~varroosis~~ status of a country or zone~~/compartment~~

The *Varroa* spp. ~~varroosis~~ status of a country or *zone*~~/compartment~~ ~~(under study)~~ can only be determined after considering the following criteria:

1) a *risk assessment* has been conducted, identifying all potential factors for *Varroa* spp. ~~varroosis~~ occurrence and their historic perspective;

2) the presence of *Varroa* spp. ~~varroosis~~ should be notifiable in the whole country or *zone*~~/compartment~~ ~~(under study)~~ and all clinical signs suggestive of varroosis should be subjected to field and *laboratory* investigations;

3) an on-going awareness programme should be in place to encourage reporting of all *cases* suggestive of varroosis;

4) the *Veterinary Authority* or other *Competent Authority* with responsibility for reporting and control of *diseases* of honey bees should have current knowledge of, and authority over, all domesticated *apiaries* in the country.

Article 9.6.4.

Country or zone~~/compartment (under study)~~ free from *Varroa* spp.~~varroosis~~

1. Historically free status

A country or *zone*~~/compartment~~ ~~(under study)~~ may be considered free from *Varroa* spp. ~~the *disease*~~ after conducting a *risk assessment* as referred to in Article 9.6.3. but without formally applying a specific *surveillance* programme (historical freedom) if the country or *zone*~~/compartment~~ ~~(under study)~~ complies with the provisions of Chapter 1.4.

2. Free status as a result of an eradication programme

A country or *zone/compartment* (under study) which does not meet the conditions of point 1 above may be considered free from *Varroa* spp. varroosis after conducting a *risk assessment* as referred to in Article 9.6.3. and when:

a) the *Veterinary Authority* or other *Competent Authority* with responsibility for reporting and control of *diseases* of honey bees has current knowledge of, and authority over, all domesticated *apiaries* existing in the country or *zone/compartment* (under study);

b) the presence of *Varroa* spp. varroosis is notifiable in the whole country or *zone/compartment* (under study), and any clinical *cases* suggestive of varroosis are subjected to field and *laboratory* investigations;

c) for the 3 years following the last reported *case* of the presence of *Varroa* spp. varroosis, an annual survey supervised by the *Veterinary Authority* or other *Competent Authority*, with no positive negative results, have been carried out on a representative sample of *apiaries* in the country or *zone/compartment* (under study) to provide a confidence level of at least 95% of detecting *Varroa* spp. varroosis if at least 1% of the *apiaries* were infested infected at a within-*apiary* prevalence rate of at least 5% of the hives; such surveys may be targeted towards areas with a higher likelihood of *infestation* *disease*;

d) to maintain free status, an annual survey supervised by the *Veterinary Authority* or other *Competent Authority*, with no positive negative results, is carried out on a representative sample of *apiaries* in the country or *zone/compartment* (under study) to indicate that there has been no new *cases*; such surveys may be targeted towards areas with a higher likelihood of *infestation* *disease*;

e) (under study) either there is no wild or self-sustaining feral population of *Apis* species *A. mellifera*, the Korea and Japan haplotypes of *Apis cerana* or other possible host species of the genus *Apis* in the country or *zone/compartment* (under study), or there is an ongoing *surveillance* programme of the wild or self-sustaining feral population of species of the genus *Apis* which demonstrates no evidence of the presence of the mite in the country or *zone*;

f) the importation of the *commodities* listed in this chapter into the country or *zone/compartment* (under study) is carried out in conformity with the recommendations of this chapter.

~~Article 9.6.4.bis~~

~~**Apiary free from varroosis**~~

~~1. The *apiary* is located in a country or *zone* complying with the requirements in points 2. a) b) and f) of Article 9.6.4.;~~

~~2. the *apiary* should be situated in an area with a radius of 50 kilometres in which no *case* of varroosis has been reported for at least the past 2 years; and~~

~~3. the *apiary* meets the conditions prescribed in Article 4.14.3.~~

Article 9.6.5.

Recommendations for the importation of live queen honey bees, worker honey bees, ~~and drones~~ honey bees, ~~with or without associated brood combs~~ larvae of honey bees, pupae of honey bees and brood combs

Veterinary Authorities of *importing countries* should require the presentation of an *international veterinary certificate* attesting that:

1) the *commodities* ~~bees~~ come from ~~an~~ *apiariesy* situated in a country or *zone/compartment* (under study) officially free from *Varroa* spp. varroosis; ~~the *apiary* meets the conditions prescribed in Article 9.6.4. bis~~; or

2) ~~In the case of the country or zone is not free from varroosis, *Veterinary Authorities* of *importing countries* should~~

~~only allow the importation of~~ the shipment comprises only queen honey bees with attendant worker honey bees without associated brood combs and the honey bees ~~should require that the bees meet the following conditions~~:

~~1.~~a) come from an artificial broodless swarm with the caged queen; ~~and~~

~~2.~~b) caged queen and swarm have been treated with an effective veterinary medicinal product; ~~and~~

~~3.~~c) were inspected by a representative of the *Veterinary Services* prior to the shipment and showed no evidence of the presence of the mites;

d) the queen honey bees were inspected by the *Veterinary Services* of the *importing country* based on a visual inspection described in the relevant chapter of the *Terrestrial Manual* and the attendant worker honey bees were killed.

~~Article 9.6.6.~~

~~**Recommendations for the importation of larvae and pupae of honey bees**~~

~~*Veterinary Authorities* of *importing countries* should require the presentation of an *international veterinary certificate* attesting that the products:~~

~~1) were sourced from a free country or *zone/compartment* (under study); or~~

~~2) have originated from queens in a *quarantine station* and were inspected and found free of *Varroa destructor*.~~

Article 9.6.~~7~~6.

Recommendations for the importation of used apicultural equipment ~~associated with beekeeping~~

Veterinary Authorities of *importing countries* should require the presentation of an *international veterinary certificate* attesting that the equipment:

1) comes from ~~an~~ *apiari~~es~~y* situated in a country or *zone/~~compartment~~* ~~(under study)~~ free from *Varroa* spp. ~~varroosis~~; or

2) contains no live honey bees or bee brood and has been held in a bee-proof environment ~~away from contact with live honey bees~~ for at least ~~7~~ 21 days prior to shipment; or

3) has been treated to ensure the destruction of *Varroa* spp. ~~species *destructor*~~, in conformity with one of the following procedures:

a) heating to 50°C core temperature and holding at that temperature for 20 minutes; or

b) freezing at core temperature of -12°C or less for at least 2448 hours ~~once the core reached -20°C~~; or

c) fumigation with methyl bromide at a rate of 48 g per cubic metre at atmospheric pressure and at a temperature of 10-15°C for a period of 2 hours; or

d) irradiation with 350 Gy; or

e) by any procedure of equivalent efficacy recognised by the *Veterinary Authority* of the *importing* and *exporting countries*.

~~referred to in Chapter X.X.~~ ~~recommended by the OIE~~ ~~(under study).~~

Article 9.6.~~8~~7.

Recommendations for the importation of ~~honey bee collected pollen~~ ~~and propolis~~ ~~for apiculture use~~, ~~unprocessed~~ ~~beeswax (in the form of honeycomb)~~, ~~and~~ ~~comb~~ honey ~~and propolis~~

Veterinary Authorities of *importing countries* should require the presentation of an *international veterinary certificate* attesting that the honey ~~products~~:

1) comes from ~~an~~ *apiaries~~y~~* situated in a country or *zone~~/compartment~~* ~~(under study)~~ free from *Varroa* spp. ~~varroosis~~; or

2) ~~is~~ has been strained ~~honey~~ through a filter of pore size no greater than 0.42 mm; or

~~2) contain no live honey bees or bee brood and has been held away from contact with live honey bees for at least 7 21 days prior to shipment; or~~

3) has~~ve~~ been treated to ensure the destruction of *Varroa*-spp.species ~~*destructor*~~, in conformity with one of the following procedures ~~referred to in Chapter X.X. recommended by the OIE (under study)~~:

   a) heating to 50°C core temperature and holding at that temperature for 20 minutes; or

   b) freezing at core temperature of -12°C or less for at least 2448 hours ~~once the core reached -20°C~~; or

   ~~c) fumigation with methyl bromide at a rate of 48 g per cubic metre at atmospheric pressure and at a temperature of 10-15°C for a period of 2 hours, or~~

   ~~d~~c) irradiation with 350 Gy; or

   d) by any procedure of equivalent efficacy ~~and~~ recognised by the *Veterinary Authorities* of the *importing* and *exporting countries*.

Article 9.6.8.

Recommendations for the importation of bee-collected pollen

Veterinary Authorities of *importing countries* should require the presentation of an *international veterinary certificate* attesting that the bee-collected pollen:

1) comes from ~~an~~ *apiaries~~y~~* situated in a country or *zone* free from *Varroa* spp.; or

2) has been treated to ensure the destruction of *Varroa* spp., in conformity with one of the following procedures:

   a) freezing at core temperature of -12°C or less for at least 24 hours; or

   b) irradiation with 350 Gy; or

   c) desiccation by freeze drying or equivalent; or

   d) by any procedure of equivalent efficacy recognised by the *Veterinary Authority* of the *importing* and *exporting countries*.

Article 9.6.9.

Recommendations for the importation of beeswax and propolis

Veterinary Authorities of *importing countries* should require the presentation of an *international veterinary certificate* attesting that the *commodities*:

1) come from ~~an~~ *apiaries*~~y~~ situated in a country or *zone* free from *Varroa* spp.; or

2) are processed beeswax or processed propolis; or

3) have been treated to ensure the destruction of *Varroa* spp., in conformity with one of the following procedures:

   a) freezing at core temperature of -12°C or less for at least 24 hours; or

   b) fumigation with methyl bromide at a rate of 48 g per cubic metre at atmospheric pressure and at a temperature of 10-15°C for a period of 2 hours; or

   c) irradiation with 350 Gy; or

   d) desiccation by freeze drying or equivalent; or

   e) by any procedure of equivalent efficacy recognised by the *Veterinary Authority* of the *importing* and *exporting countries*.